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ORGANIZATIONAL-METHODICAL PRINCIPLES OF ANTI-BRUCELLOSIS
MEASURES IN UKRAINE SSR

By

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During the first years after the great national war, the brucellosis of animals was registered in all regions of the Ukrain, SSR. This disease caused significant economical loss to the farms.

The greatest number (1615) of places having brucellosis of the cattle was revealed in 1952. During the same year, 67% of the investigated animals suffered from brucellosis.

Until 1957, health measures against brucellosis in the republic were based mainly on systematic diagnostic investigations of the animals, the slaughtering of all cattle which gave positive result for brucellosis, except the highly productive cows which were concentrated in special isolations; and organization of raising of healthy young ones in the complex with other veterinary-sanitary and agricultural measures recommended at that time for controlling brucellosis.

From 1957, in many farms having this disease, vaccine from the strain 19 was given to the cattle against brucellosis as a prophylactic measure. In the farms of the Kharkov region, in addition to the vaccine from the strain 19, the vaccine UNIEV was also used (P. N. Zhovanik).

With the increase of the number of cattle in the collective and state farms, these measures were found to be labor-intensive and did not give the expected effect.

The measures undertaken during the past 10 years on the liquidation of brucellosis in the Ukrainian SSR, somewhat differ from the ones which have been recommended. However, the modification suggested by us regarding the instructions, neither complicates nor weakens the conventional measures against brucellosis in the Soviet Union, on the contrary, makes it more accessible in the organization and more effective.

Measures for the protection of farms free of brucellosis are basically with the ones recommended for controlling the brucellosis. Taking into account the possibility of latent transmission of brucellosis in the young ones and imperfection of diagnosing brucellosis in the republic, the young ones obtained from the uterus of cows from a farm having brucellosis was introduced to farms free of this disease. This was independent of the method of raising the young ones. In addition, all animals having contact with animals suffering from brucellosis were also introduced to farms free of brucellosis.

Serious attention has been paid to the prevention of contact of different sanitary groups of cattle at the pastures during displacement of the animals to indoor maintenance as well as contact with domestic animals belonging to the citizens.

For the prevention of distribution of the infection along with milk products, all the factories working on the processing of milk in the republic were asked to return milk to the collective and state farms only after pasteurization and before feeding the milk to the young ones, and they should once again make it harmless at the farms.

Depending on the degree of distribution and character of transmission of the brucellous infection in the area or region, the farms having brucellosis are kept clean by the following basic means:

1. By way of systematic complex serological investigations of the cattle and slaughtering of the animals giving positive results of brucellosis.

This method is applied in farms with little distribution of the disease as well as for the protection of the cattle belonging to the personnel of the collective farms.

2. By the method of prophylactic inoculation of the young ones of the cattle with vaccine against brucellosis in the complex along with other anti-epizootic measures. This method is applied in farms with large distribution of infection where it is impossible to undertake healthy protective measures by way of substitution of the particular young ones with the young one brought from the farms which are without this disease.

3. By way of substitution of the young one of a particular breed with a young one brought from farms which are without brucellosis and the raising of healthy flock from this young one in isolated farms.

This is done in farms where brucellose isolators are present and also in collective and state farms, where the isolators are thoroughly liquidated but the isolation of the animals positive for brucellosis is not stopped for a long time.

4. By the method of substitution of the entire herd having brucellosis with healthy animals from farms free of brucellosis. This method is applied for the sanitation of sheep and swine farms against brucellosis, as well as for the sanitation of the cattle in areas and regions where there are solitary farms having brucellosis which have not been subjected to other methods of sanitation for a long time.

According to the data of many investigations, the young cattle, especially at an earlier age, possess high natural resistance against brucellosis. On this basis, for the liquidation of brucellosis in farms having brucellosis, isolated raising of the young cattle is done for the creation of a healthy herd. However, a series of contradictory data have been published. In our republic, there are examples where implementation of well thought-out system of measures on the raising of healthy herd from the young cattle obtained from the cows of the herd having brucellosis ended in failure. Thus, in the collective farm "Nove Zhitia" of the Dnepropetrovsky region, after the establishment of diagnosis for brucellosis, all cows of the herd having brucellosis were given for slaughtering and the young cattle obtained from these were left behind on the farm. After carrying out the necessary sanitary measures for more than one year restrictions for brucellosis were lifted from the farms. Within 11 months after this, the collective farm sold out 80 calves to a farm without having brucellosis in any other region. Before taking out from the farm and in the period of prophylactic quarantine, these calves gave negative results for brucellosis. However, abortions were registered after pairing among them and in the remaining calves left at the farm. From the fetus, a culture of brucellosis was isolated and with serological investigations of blood after PA and PCK many animals gave positive result for brucellosis.

By taking into account the above-mentioned facts in a series of farms having brucellosis, the calves were replaced by the ones

from farms which were without brucellosis. Calves obtained from the cows having brucellosis failed to be utilized for the purposes of commercial production in Ukraine since 1957. Such young cattle were sent for slaughtering.

The healthy cattle for substitution of sick cattle is used only at isolated animal-raising farms or their sections from where all sick cattle have been removed and the young ones obtained from them, too, have been taken out. The premises and territories of such farms must be free from animals throughout the summer. During this time, these are carefully cleaned from the dirt, are twice disinfected, and in the animal farming premises, in addition, capital sanitary repair is also done.

With the purpose of quickest sanitation of the farms by way of substitution of sick cattle with healthy cattle, specialized farms were created at clear places in a number of areas and regions, for raising healthy calves of a special herd of cows and also for the substitution of cows in farms having brucellosis.

For carrying out sanitary measures, particularly in southern and eastern regions, earlier vaccinal-prophylaxis against brucellosis was carried out with the vaccine from strain 19.

Having analyzed materials on the application of the vaccine from strain 19, which was used in a general complex of anti-brucellosis measures on more than 900 farms, we arrived at the conclusion that positive result is given by the inoculation of the vaccine to the young cattle in un-clean farms and to the adult healthy groups of animals. By vaccination of animals during an outbreak of brucellosis and with a large number of abortions, we did not get the expected result. In addition, the inoculation of vaccine to the adult animals in un-clean farms lead to long (three to five years and more) preservation of positive serological reactions among the animals. Many such animals were particularly isolated in farms where the cattle were revaccinated, which significantly prolonged the period of sanitation of the farms.

Along with this, the data of checking and analysis of materials on vaccination of the cattle gave a basis to think that positive serological reactions in periods remote after vaccination are observed in the animals, not only in the

presence of brucellosis infection but also at places where, in our opinion, it is not present.

Thus, in the collective farm named after Kirov, Kirovgradskoi region, in the absence of clinical symptoms of brucellosis in the animals and by maintenance of healthy un-vaccinated animals in the vaccinated herd, within five years after vaccination positively reacting animals out of the ones earlier inoculated continued to be isolated. Such examples were many.

This served as a reason for carrying out a new order of immunization of animals against brucellosis in the republic with the vaccine of the strain.

The calves were subjected to the primary prophylactic vaccination not later than five to eight months of age. The young cattle of older age and the adult animals were inoculated with the vaccine, if this animal was free of brucellosis and vaccination was done with the permission of the veterinary section of the Regional Agricultural Management. The young cattle, among which animals having brucellosis are isolated, are fed and are later slaughtered.

In farms where vaccination of the young cattle is done, it is recommended to raise the inoculated animals in separate sections. Where, earlier, the adult cattle was vaccinated the inoculated animals must be kept in separate sections.

The animals were immunized with the vaccine UNIEV in farms where there were cows suffering from brucellosis. Out of 47 farms of the Kharkov region in which the animals were inoculated 32 became healthy.

In farms, collective farms and state farms and the populated places where the infection did not attain wide spreading and for the recovery of the cattle, investigations are being carried out by PA and PCK with the removal of animals from the herd which give positive results for brucellosis, the complex investigations of animals are done after every two to three weeks until double negative results were obtained in the entire group. In addition, we do not allow the introduction of healthy animals from clean farms to such herds.

It would be noted that special attention is being focussed in the republic on the liquidation of brucellosis isolators. Out of the 25 regions of the Ukrainian republic, the prophylactic and sanitary anti-brucellosis measures are undertaken in 17 regions without over-exposure of the sick animals.

Since 1957, the year for sanitation of the sheep-farming against brucellosis infection, a complex of measures has been undertaken which, basically, includes the following: after carrying out lambing and fattening all flocks of sheep sick with brucellosis with young ones obtained from these were killed. In un-clean farms, flocks of those lambs were formed which were obtained from the clean uterus in terms of the disease brucellosis of the flocks. The exit of sheep of the flocks sanitation of which had been carried out with the help of inoculation with the vaccine of strain 19 (there were 11 such farms) was not allowed. This was also applied to sheep from the healthy flocks mixed with the flocks in farms which had brucellosis and the separate places, brigades right up to their absolute sanitation.

The special veterinary and organizational-agricultural measures undertaken by us gave positive results.

In 1963, the brucellosis of sheep in the republic was liquidated.

Unclean hog farms were found in two regions.

There are certainly flaws in the work on control of brucellosis in the republic. In some farms, for example, particularly in Khmel'nitskoi, Odesskoi, Kharkoi, Zaporozhskoi regions, these measures are being undertaken insufficiently. A constant effort is under way to remove these drawbacks. The number of such farms is decreasing every year.

Veterinary specialists are fighting with brucellosis and have contacts with bodies working for animal health. In the areas and regions of the republic, joint complex plans are being formulated for carrying out anti-brucellosis measure. The results of the work are regularly discussed at joint conferences of the veterinary and medical and scientific workers and practical physicians.

Liquidation of brucellosis of sheep, sharp decrease in sickness of the cattle and pigs with brucellosis lead to the fact that the disease of brucellosis among the population of the republic is now being almost not registered.

There is a bases for stipulating that towards the 50th Anniversary of the Great October, in 17 regions of the Ukraine SSR, the sanitation of the cattle against brucellosis would be concluded.
